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(54) **Baking-tin adapted to cook and distribute sweet things such as small cakes, puddings and the like, or foodstuffs in general.**

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DE-A- 2 921 516
FR-A- 2 291 111
US-A- 2 815 129
US-A- 3 054 679
US-A- 4 039 797

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Description

The present invention relates to a baking-tin to cook and distribute sweet things such as small cakes, puddings and the like (hereinafter referred to as cakes) or foodstuffs in general.

It is known that when cakes have to be cooked it is generally necessary to use baking-tins adapted to contain a certain amount of said cakes in order to allow the simultaneous introduction thereof into an oven and the simultaneous withdrawal therefrom.

For the purpose different types of baking-tins are currently used.

One of these types has a laminar metal structure and is provided with a number of niches, each of them designed to contain a cake. However baking-tins of this type involve high production costs as well as long times for the production of the cakes and, as a result, high costs due to a greater heat consumption. In fact in this case at the end of cooking it is necessary to withdraw the cakes from the respective niches and afterwards to pack them up in order to allow their distribution to retailers or consumers.

A further drawback of the above baking-tins is that they need a careful servicing as they must be periodically washed and sterilized. In addition said baking-tins cannot be used to cook cakes in modern microwave ovens, due to the undesired wave reflections they can generate inside the ovens themselves.

Baking-tins made of plastic material are also known but they are substantially identical, as to their construction concept, with the metal baking-tins previously described. In fact the only advantage they have is that their production costs are lower, while they are subjected to all the other drawbacks proper to metal baking-tins.

It is clear that under this situation the provision of baking-tins adapted to make it possible an important reduction in operation and times for the obtention of the finished product would be desirable.

In this connection the applicant has devised a particular type of cake container which has been the subject of the Italian Patent Application No. 2304B/82 filed in the name of the same applicant.

Such patent application relates to a cake container substantially consisting of a laminar support made of paper material into which by means of through holes a plurality of housings is created each of them accommodating a small pleated-paper cup substantially in the form of an upwardly open truncated cone or pyramid, designed to contain a cake.

Advantageously the containers of this type have proved to be adapted for use as baking-tins

to cook cakes therein as well as to be directly wrapped up, at the end of baking, together with the cakes themselves in order to constitute a finished packed product.

By the use of these containers it is also possible to eliminate all other drawbacks mentioned above with reference to metal and plastic baking-tins. In fact they have very reduced manufacture costs, do not need servicing as they are used only once, and do not give rise to any problems when used in microwave ovens.

However it was found that they are not adapted to be carried by automated transport systems interlocked to ovens and to packing devices of modern conception. In addition said containers only make it useful and convenient to introduce into the oven and to pack a given amount of cakes, predetermined at the moment of the manufacture thereof, since they cannot be separated into pieces or portions adapted to contain a number of cakes different from the one mentioned above.

It is also known from the French patent n. FR-A-2 291 111 a support made of plastic material, provided with plurality of through holes for housing small cups in plastic material and having a number of fracture lines defining a plurality of support portions. The edges of the cups are outbent and fixed on the support.

Moreover the support is provided with a plurality of engagement seats placed on the outer edges of the support and a plurality (if shaped holes obtained in the region where said fracture lines intersect each other).

The support shows the small cups having their upper rims outbent on the edge of the support around the through holes.

The above mentioned fracture lines allow to easily divide the support into several portions while the engagement seats allow the support to be carried by automatic transport means.

Moreover, it is known from the American patent US-A-3 054 679 a laminar support made of paper material and having a series of shaped holes. The laminar support also shows engagement seats whose shape is half a part of the shaped holes.

It is to be noted, however that the supports and cups shown in the cited documents are subjected to some drawback. In fact, if these supports allow, on one side, to be easily handled by automatic transporting means they do not allow an easy disassembly of cups from the support since the cups are sealed or glued to the support.

Moreover, if the cake must be taken out from the cups, the operator must use a tool if he does not want to touch the cake with his hands.

The object of the present invention is to eliminate the above drawbacks by providing a baking-tin which, being conceptually based on the cake con-

tainers specified above, is also adapted to be carried by, automatic transport means and to be easily divided into several portions.

The foregoing and still further objects that will become more apparent in the following are substantially attained by a baking-tin for cooking and distributing cakes and foodstuffs in general, of the type comprising a laminar support made of paper material provided with a plurality of through holes each of them housing a small pleated-paper cup, said laminar support having a number of fracture lines defining a plurality of support portions each of them circumscribing at least one of said small cups, as well as shaped holes obtained in the region where said fracture lines intersect each other, a plurality of engagement seats being provided on the outer edges of said laminar support of the baking-tin and exactly in the region of intersection between the edges themselves and said fracture lines, the configuration of said engagement seats corresponding to half a part of the shaped holes, said small pleated-paper cups having their upper rims outbent on the edge of said support around the through holes, each of said small pleated-paper cups being provided with a restrained fixing portion located on the upper rim of said cups and consisting of a series of consecutive folded parts extending circumferentially, each of said small cups being fastened in a removable manner to said support in the region of its respective through hole by causing the edge of said support to penetrate between two consecutive folds.

Further features and advantages of the invention will become more apparent from the detailed description of a preferred but not exclusive embodiment of a baking-tin to cook and distribute cakes and foodstuffs in general according to the present invention, given hereinafter by way of non-limiting example with reference to the accompanying drawings, in which:

- Fig. 1 is a perspective and partly exploded view of a baking-tin according to the present invention;
- Fig. 2 shows the baking tin seen in Fig. 1 sectioned along a transverse plane diametrically crossing the small cups according to one embodiment;

Referring to the drawings and particularly to Fig. 1, a baking-tin according to the invention has been globally identified by reference numeral 1.

The baking-tin essentially comprises a support element 2 of laminar structure, made of paper material, into which a plurality of through holes 3 is cut, each of them adapted to engage a small pleated-paper cup 4. Each cup is designed to contain one cake or the like. Originally a number of fracture lines 5 is provided on the support element 2, which lines define, on the support element itself,

a plurality of support portions 6, each of the latter circumscribing a small cup 4.

Furthermore, a shaped hole 7 is machined by means of a hollow punch, at each crossing of two fracture lines 5.

Along the outer edges of the baking tin 1 provision is also made for a plurality of engagement seats 8 each of them being formed in the region where the outer edge itself intersects one of said fracture lines 5 and having a configuration similar to half a part of a shaped hole 7.

Said engagement seats are advantageously adapted to be engaged by grasping elements carried by automated transport means interlocked to the ovens or to packing devices known per se.

The presence of fracture lines on the support element advantageously allows the baking-tin 1 to be divided into several portions each of them comprising any number of small cups 4 so that it may be possible to house the desired number of cakes.

By virtue of the fracture lines 5 it is also possible to separate a tin portion comprising a single small cup from the whole baking-tin as clearly shown by way of example in Fig. 1.

It is also advantageously provided, as it is possible to deduce from Fig. 1, that when the baking-tin 1 is divided into two or more portions along aligned fracture lines 5, the presence of the shaped holes 7 gives rise, on the outer edges of the tin portions thus obtained, to new engagement seats identical with the engagement seats mentioned above.

As better shown in Fig. 2 each small cup 4 is provided, on its upper rim, with a restrained fixing portion 9 obtained by a series of consecutive folded parts 10 extending circumferentially, substantially according to superposed horizontal planes. In this case the small cup 4 is fastened in a removable manner to the support element 2 in the region of the through hole 3 thereof due to the fact that the edge of said support element penetrates between two consecutive folds 10.

The present invention attains the intended purposes.

In this case it is therefore advantageously possible to separate the small cup 4 from the support element 2 so that the cake contained therein may be handled more easily. More particularly, the small cup both for the packing step and the eating step can be easily removed from its housing in the support element. Afterwards, by exerting a pulling action on the small cup's outer rim the cake can be easily withdrawn and eaten.

Claims

1. A baking-tin for cooking and distributing cakes and foodstuffs in general, of the type compris-

ing a laminar support (2) made of paper material provided with a plurality of through holes (3) each of them housing a small pleated-paper cup (4), said laminar support (2) having a number of fracture lines (5) defining a plurality of support portions (6) each of them circumscribing at least one of said small cups, as well as shaped holes (7) obtained in the region where said fracture lines (5) intersect each other, a plurality of engagement seats (8) being provided on the outer edges of said laminar support (2) of the baking-tin and exactly in the region of intersection between the edges themselves and said fracture lines (5), the configuration of said engagement seats (8) corresponding to half a part of the shaped holes (7), said small pleated-paper cups (4) having their upper rims (4a) outbent on the edge of said support around the through holes, each of said small pleated-paper cups (4) being provided with a restrained fixing portion (9) located on the upper rim of said cups and consisting of a series of consecutive folded parts (10) extending circumferentially, each of said small cups (4) being fastened in a removable manner to said support (2) in the region of its respective through hole (3) by causing the edge of said support (2) to penetrate between two consecutive folds (10).

Revendications

1. Moule de cuisson adapté à la cuisson et à la distribution de petits gâteaux et comestibles en général, du type comportant un support laminaire (2) fabriqué en papier et pourvu d'une pluralité de trous de passage (3) chacun desquels loge un petit moule de papier crêpé (4), ledit support laminaire (2) ayant une pluralité de lignes de rupture (5) définissant une pluralité de portions de support (6) chacune desquelles circonscrit au moins un desdits petits moules, ainsi que des trous conformés (7) obtenus dans la zone où lesdites lignes de rupture (5) se coupent, une pluralité de logements d'engagement (8) étant prévus sur les bords extérieurs dudit support laminaire (2) du moule et exactement dans la zone d'intersection entre les bords eux-mêmes et lesdites lignes de rupture (5), la configuration desdits logements d'engagement (8) correspondant à la moitié des trous conformés (7), lesdits petits moules de papier crêpé (4) ayant leurs rebords supérieurs (4a) repliés à l'extérieur sur le bord dudit support autour des trous de passage, chacun desdits petits moules de papier crêpé (4) étant pourvu d'une portion d'emboîtement (9) située sur le rebord supérieur desdits petits

moules et comportant une série de parties repliées (10) consécutivement, s'étendant circumférentiellement, chacun desdits petits moules (4) étant fixé de manière amovible audit support (2) dans la zone de son respectif trou de passage (3) moyennant la pénétration du bord dudit support (2) entre deux plis consécutifs (10).

Patentansprüche

1. Backblech für das Kochen und das Abteilen von Kuchen und Nahrungsmitteln im allgemeinen der Art umfassend:
 - eine aus einem Papierwerkstoff erzeugte Folienstütze (2), die mit mehreren je eine kleine Form (4) aus gefaltetem Papier aufnehmenden Durchgangslöchern (3) versehen ist, wobei die o.e. Folienstütze (2) mehrere Reißlinien (5) aufweist, die mehrere je wenigstens eine der o.e. kleinen Formen umschreibende Stützenteile (6) abgrenzen, sowie
 - geformte Löcher (7), die in dem Gebiet erhalten werden, wo sich die o.e. Reißlinien gegenseitig überschneiden,
 wobei mehrere Einfallsitze an den Außenränder der o.e. Folienstütze für das Backblech genau bei den Überschneidungspunkten zwischen den Rändern selbst und den o.e. Reißlinien (5) vorgesehen sind und die Gestaltung dieser Einfallsitze (8) dem halben Teil der geförmten Löcher (7) entspricht, während die o.e. kleinen Formen (4) aus gefaltetem Papier oben auf den Rand der o.e. Stütze um die Durchgangslöcher herum nach außen gebördelt (4a) sind und jede der o.e. kleinen Formen (4) aus gefaltetem Papier mit einem Einspannungsteil (9) versehen ist, das am oberen Bördelrand (4a) dieser Formen liegt und aus einer Serie aufeinanderfolgenden umgebogenen sich kreisförmig erstreckenden Teilen (10) besteht, wobei jede der o.e. Formen (4) an der o.e. Stütze (2) bei deren jeweiligem Durchgangsloch (3) durch Hineinstecken des Randes der o.e. Stütze (2) durch zwei aufeinander folgende Falten (10) abnehmbar befestigt ist.

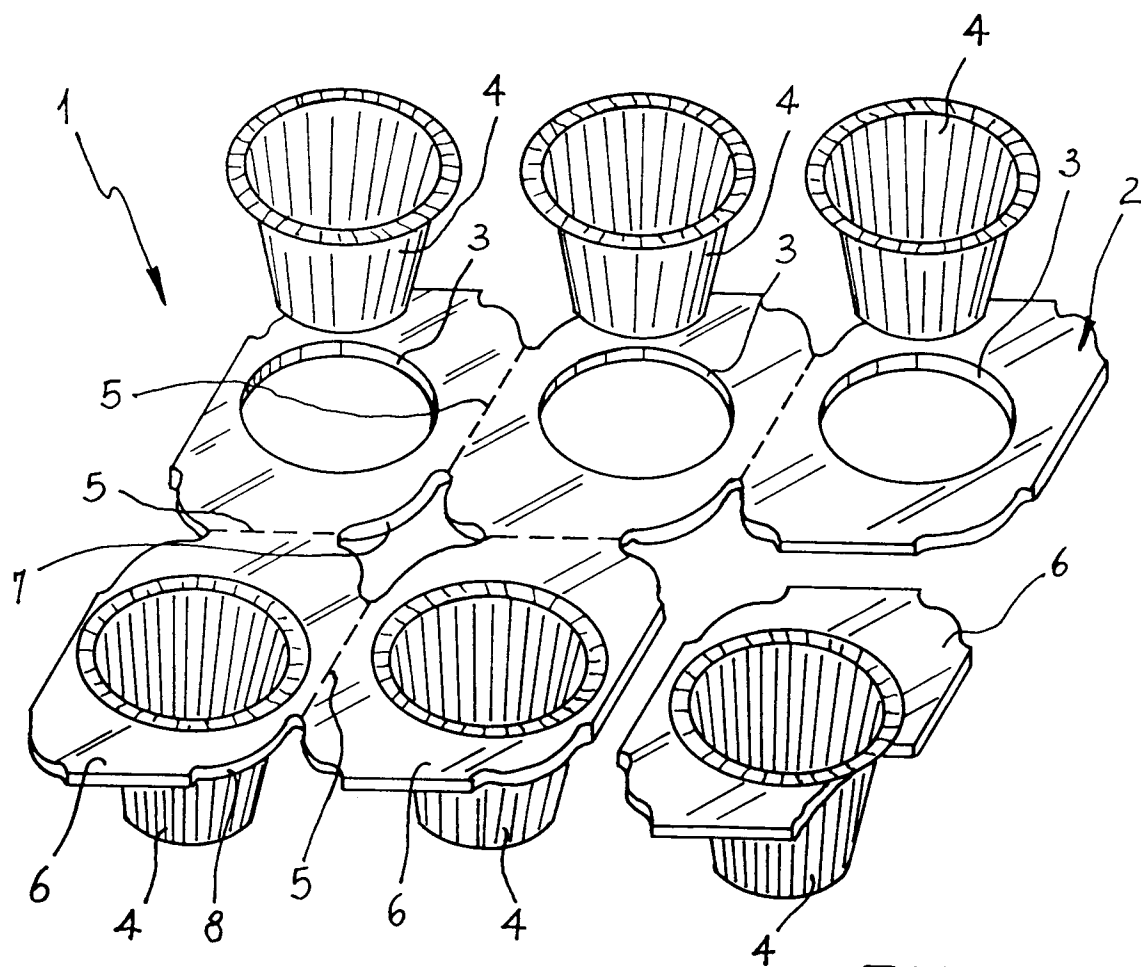


FIG. 1

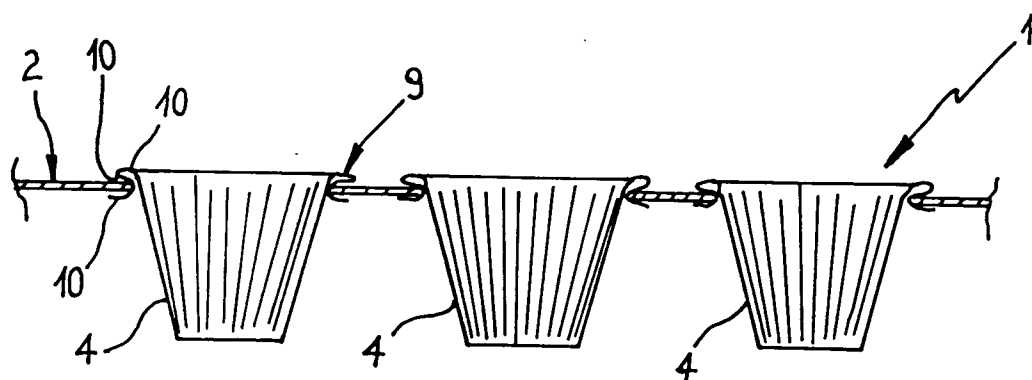


FIG. 2